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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/849,981

05/20/2004

Ernst Friedrich Ach

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50659 7590 01/17/2007

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EXAMINER

MATTHEWS, TERRELL HOWARD

ART UNIT

PAPER NUMBER

3654

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/849,981		ERNST FRIEDRICH ACH	
	<b>Examiner</b>		<b>Art Unit</b>	
	Terrell H. Matthews		3654	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) 2-3, 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**FINAL REJECTION**

Applicant's arguments filed 10/18/2006 have been fully considered but they are not persuasive for reasons as detailed below.

The prior art rejections have been maintained or modified as follows:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,4-7, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda (WO 99/43589) in view of Kinoshita (US-5891561) in further view of Danhauer (US 2002/0098935).

Referring to claims 1,4-7. Baranda discloses an "Elevator System Having Drive Motor Located Between Elevator Car and Hoistway Sidewall" as claimed. See Figs. 1-8 and respective portions of the specification. Baranda further discloses a drive motor (42) mounted at a head of an elevator shaft and having a drive pulley; an elevator car (16) movable in the elevator shaft; a counterweight (48) movable in the elevator shaft and arranged laterally of the elevator car (See Pg. 2 – Pg. 3 l. 17 & Fig. 2). Baranda further discloses a flat-belt-like support means supporting the elevator car by under looping and engaging the drive pulley, Baranda does not disclose the

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support means being a wedge-ribbed belt having a running surface facing the drive pulley and a plurality of ribs and grooves formed with an angle in the range of 80 to 100 degrees in the running surface and extending in parallel in a longitudinal direction of the support means.

Kinoshita discloses a "Power Transmission Belt With Load Carrying Cord". See Figs. 1- 3 and respective portions of the specification. Kinoshita further discloses a wedge-ribbed belt (10) with ribs and grooves being one of triangular-shaped and trapezium-shaped in cross section (See at least Col. 3 l. 12-30 and at least Fig. 1). Danhauer discloses a belt (10) with a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction on the support means (See Sect. 0017 & Figs. 1-2). Furthermore, Danhauer discloses that the belt (10) is provided with a plurality of transverse grooves (34) (See Sect. 0025) and that the grooves are provided at an inclined angle. Additionally, it should be noted that the belt (10) has at least two wedge-ribbed belt strands arranged in parallel (See Figs. 1-2). It would have been obvious to a person of ordinary skill in the art to modify the apparatus of Baranda to include the teachings of Danhauer and provide a wedge-ribbed belt with a plurality of ribs and grooves formed in the running surface as well as transverse grooves and ribbed strands formed at an inclined angle as taught by Kinoshita and Danhauer so that the belt could provide better traction, increased flexibility, running quietness, and a higher load capacity.

Referring to claim 7. Baranda does not disclose that the drive pulley has an external diameter in a range of 70 to 100 millimeters. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include drive pulleys that were in the range of 70 to 100 millimeters so that greater torque and lifting capacity could be achieved.

Referring to claim 9-10. Baranda discloses that the drive motor and drive pulley are mounted in a space which lies between one side of the elevator car, when the elevator car is standing in an uppermost position in the elevator shaft, and an adjacent wall of the elevator of the elevator shaft and an axis of the drive pulley is arranged horizontally and parallel to the one side of the elevator car (See Fig. 2). Baranda further discloses a belt connected at one end of the side of the elevator car at a first support means fixing point (104), which extends from the first support means fixing point vertically upwards to a side which faces the elevator car, of a periphery of the drive pulley, loops around the drive pulley by 180 and then runs vertically to a second support means fixing point (102) at the counterweight (See Fig. 3). Baranda does not disclose that the belt connected at one end of the elevator is a wedge-ribbed belt; it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to implement a wedge-ribbed belt as taught by Kinoshita for reasons as discussed above.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Kinoshita (US-5891561) in further view of Danhauer (US 2002/0098935) as applied to claims 1, 4-7, 9-10, 13 as advanced above and in further view of Bauer (US-2002/0185338).

Referring to claim 8. Baranda does not disclose that the drive motor and drive pulley are mounted on a drive bracket attached to at least one guide columns. Bauer discloses a "Rope Elevator" as claimed. See Figs. 1-4 and respective portions of the specification. Bauer further discloses that a drive motor (14) and a drive pulley (13) are mounted on a bracket attached to at

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least one of the guide columns (See at least Sect. 0017 & at least Fig. 2). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda in view of Kinoshita & Danhauer to include the teachings of Bauer and provide a bracket so that the drive motor and drive pulley could be mounted together so that when forces were exerted as a result of the elevator they would not be loaded on the walls.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Kinoshita (US-5891561) in view of Danhauer (US 2002/0098935) as applied to claims 1, 4-7, 9-10, 13 as advanced above and in further view of Mori (US-2002/0112924).

Referring to claims 11-12. Baranda does not disclose a belt transmission means for coupling the drive motor to the drive pulley or that the belt transmission means includes at least one cogged belt and a wedge-ribbed belt coupling the drive motor to the drive pulley. Mori discloses a "Elevator Apparatus" as claimed. See Figs. 1-22 and respective portions of the specification. Mori further discloses a belt transmission means coupling the drive motor (52) to the drive pulley (51) (See Sect. 0040 & Figs. 1,19). Kinoshita discloses a wedge-ribbed belt (10) with ribs and grooves being one of triangular-shaped and trapezium-shaped in cross section (See at least Col. 3 l. 12-30 and at least Fig. 1). Danhauer discloses a belt (10) with a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction on the support means (See Sect. 0017 & Figs. 1-2). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda in view of Kinoshita and Danhauer and to provide a belt transmission that coupled the drive motor and

drive pulley that consisted of at least one of a cogged belt and a wedge-ribbed belt as taught by Mori so that a cogged and wedge-ribbed belt so that the elevator could benefit from an increased load capacity and better traction.

*Response to Arguments*

Applicant's arguments that the prior art fails to teach the claimed features are unconvincing. In particular, Applicants focus on "grooves being formed with lateral flanks at an angle in a range between 80 to 100" is unpersuasive. Danhauer teaches that it is known in the art to provide grooves with lateral flanks formed at an inclined angle. It would have been obvious to one having ordinary skill in the art at the time of the invention to provide the grooves formed with lateral flanks at an angle in a range of 80 to 100, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art to which it would have been obvious to do so in order to increase traction capability, running quietness, and load capacity. Consequently, as a review of the prior art undermines Applicant's arguments, the claims stand rejected.

Examiner has maintained the prior art rejections, statutory rejections and drawing objections as previously stated and as modified above. Applicants' amendment necessitated any new grounds of rejection present in this Office action. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heinz (US-2003/0121729) discloses a "Lift Belt System" comprising a belt with grooves being one of triangular-shaped and trapezium-shaped in cross section and being formed with lateral flanks at an angle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell H. Matthews whose telephone number is (571)272-5929. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

THM



GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER